

HU:MGSDVRDLNALLPAVPSLGGGGGCGALPVSGAAQWAPVLDFAAPPASAYGSL
MO:MGSDVRDLNALLPAVSSLGGGGGCGLPVSGAAQWAPVLDFAAPPASAYGSL

HU:GGPAPPPAPPPPPPPPPHSHFIXQEP SWGGAEPHEEQCLSAFTVHFSGQFTGTAG
MO:GGPAPPPAPPPPPPPPPHSHFIXQEP SWGGAEPHEEQCLSAFTLHFSGQFTGTAG

HU:ACRYGPF GPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQGYSTVTFDGTGS
MO:ACRYGPF GPPPPSQASSGQARMFPNAPYLPSCLESQPTIRNQGYSTVTFDGAPS

HU:YGHTPSHHAAQFPNHSFKHEDPMGQQGSLGEQQYSVPPPVYGCHTPTDSCTG
MO:YGHTPSHHAAQFPNHSFKHEDPMGQQGSLGEQQYSVPPPVYGCHTPTDSCTG

HU:SQALLLRTPYSSDNLYQMTS QLECMTNQMNLGATLKGVAAGSSSSSVKWTE
MO:SQALLLRTPYSSDNLYQMTS QLECMTNQMNLGATLKGMAAGSSSSSVKWTE

HU:GQSNHSTGYESDNHTTPIICGAQYRIHTHGVRGIQDVRRVPGVAPTLVRSAS
MO:GQSNHGIGYESDNHTAPIICGAQYRIHTHGVRGIQDVRRVSGVAPTLVRSAS

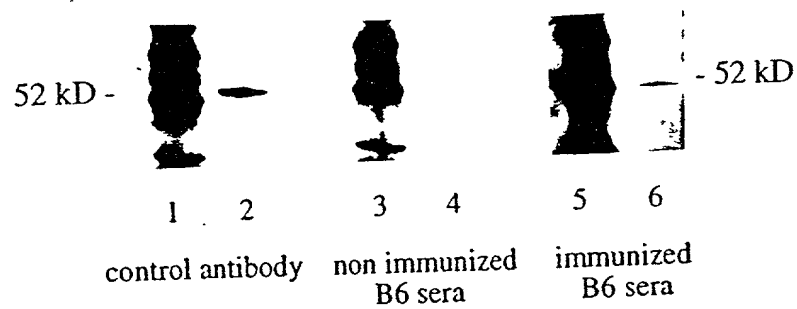
HU:ETSEKRPFMCAYPGCNKRYFKLSHLQMSRKHTGEKPYQCDFKDCERRFSR
MO:ETSEKRPFMCAYPGCNKRYFKLSHLQMSRKHTGEKPYQCDFKDCERRFSR

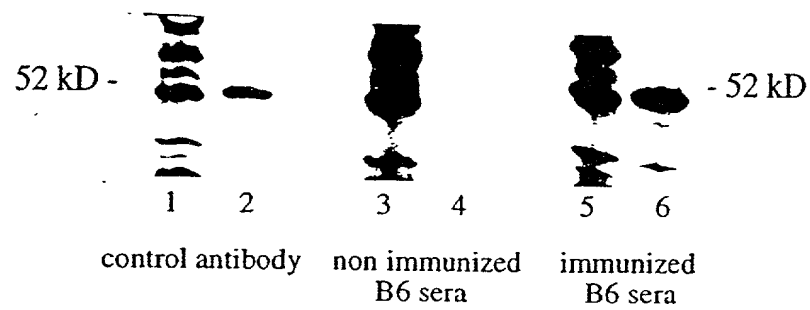
HU:SDQLKRHQRRHTGVKPFQCKTCQRKFSRSDHLKTHTRTHTGKTSEKPFSCR
MO:SDQLKRHQRRHTGVKPFQCKTCQRKFSRSDHLKTHTRTHTGKTSEKPFSCR

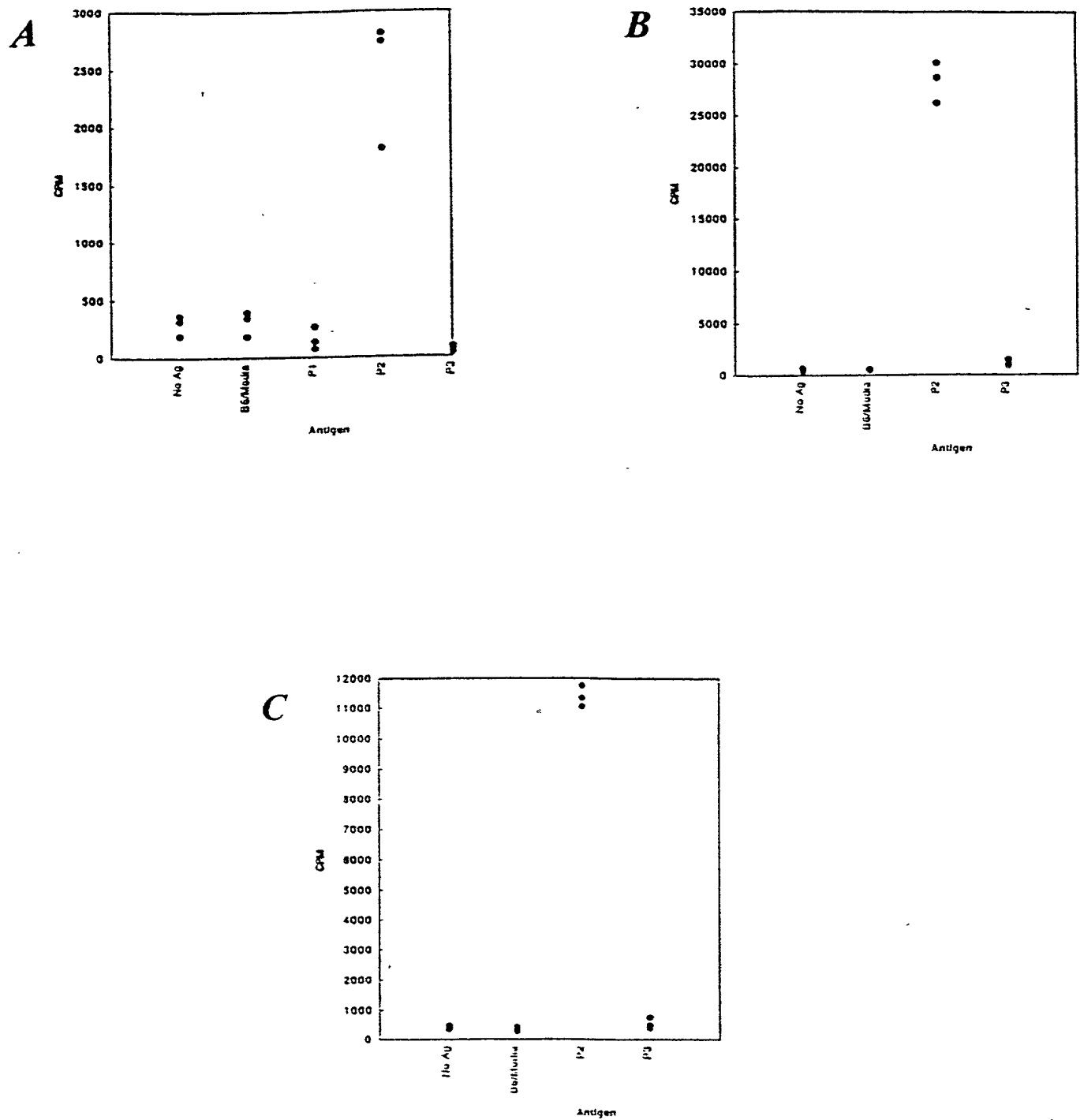
HU:WPSCQKKFARSDELVRHENMHQRNMTKLQAL
MO:WESCQKKFARSDELVRHENMHQRNMTKLHVAL

FIG. 1

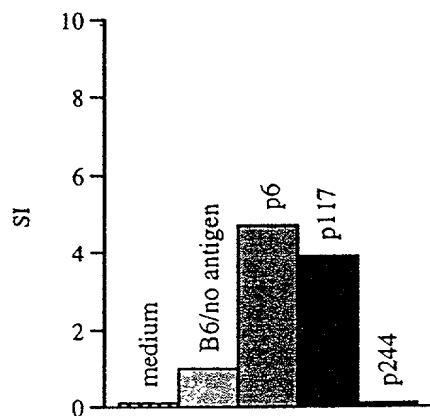
**FIG. 2**

**FIG. 3**

**FIG. 4**

**FIG. 5A-5C**

A Vaccine A stimulated line



B Vaccine B stimulated line

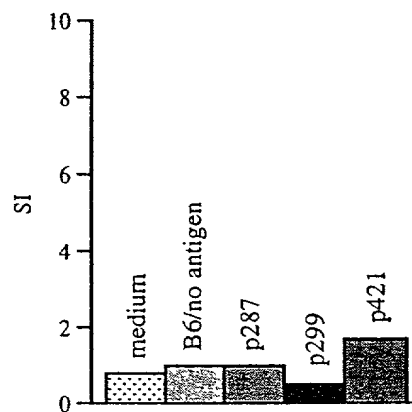
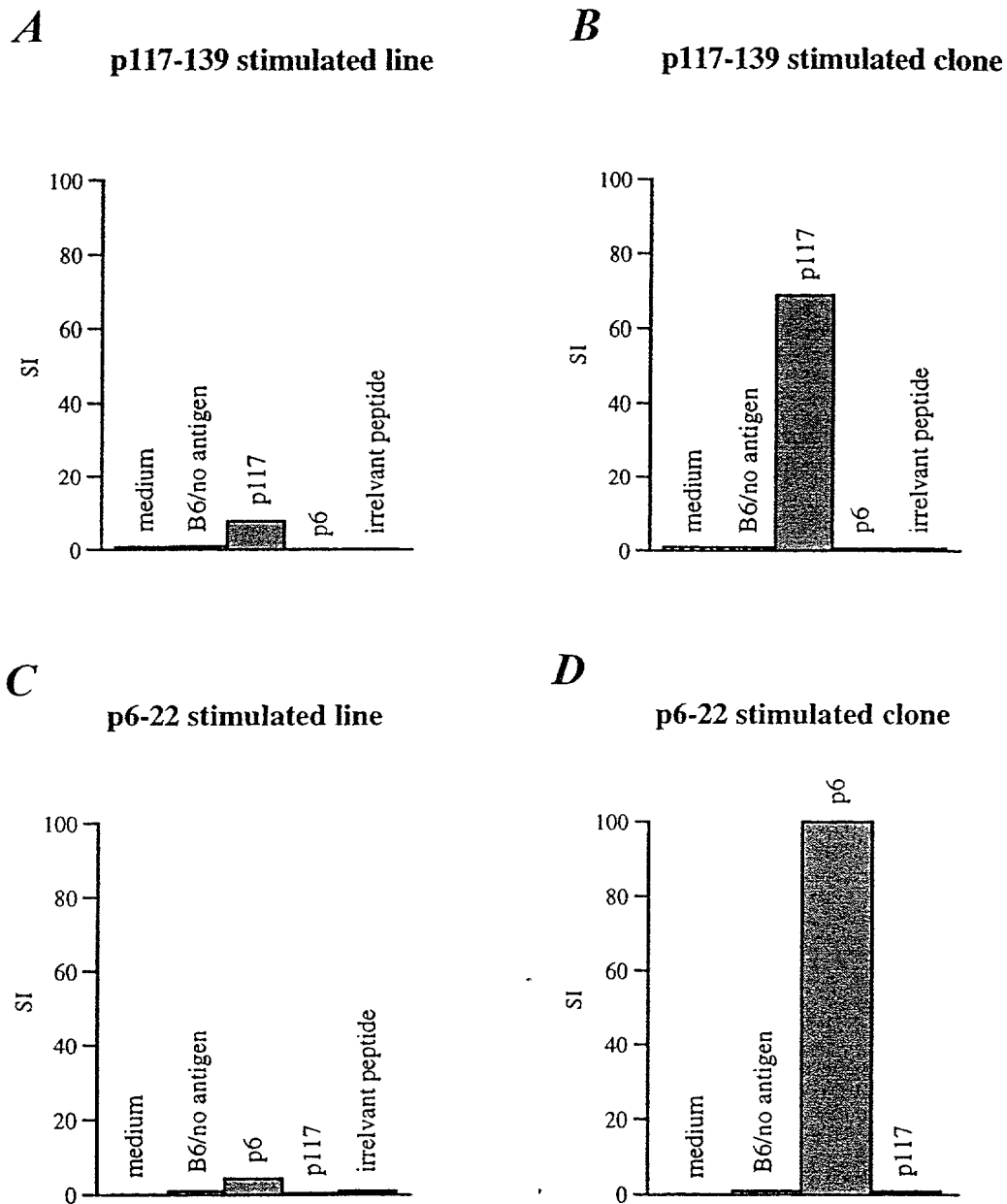


FIG. 6A and 6B

**FIG. 7A-7D**

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
MGSDVRDLNALLPAVPSLGGGGGCALPVSGAAQWAPVLDFAFPGASAYGSLGGPAPPPAPPPPPPPPHSFIKQE
.....AAAAAAAAAAAAAAAA.....AAAAA.....AAAAAAAAAAAA.....
.....RRRR.....
.....
.....

80 85 90 95 100 105 110 115 120 125 130 135 140 145 150
PSWGGAEPHEEQCLSAFTVHFSGQFTGTAGACRYGPFPPPPSQASSGQARMFPNAPYLPSCLESQPAIRNQYS
.....AAA.....AAA.....AAA.....AAAAA.....
.....RRRR.....RRRR.....
.....DDDDDDDD.....
.....

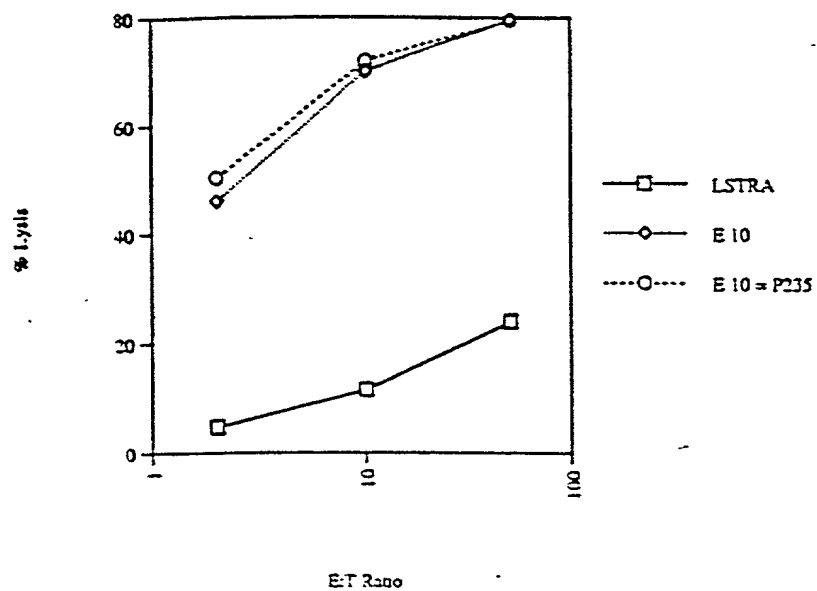
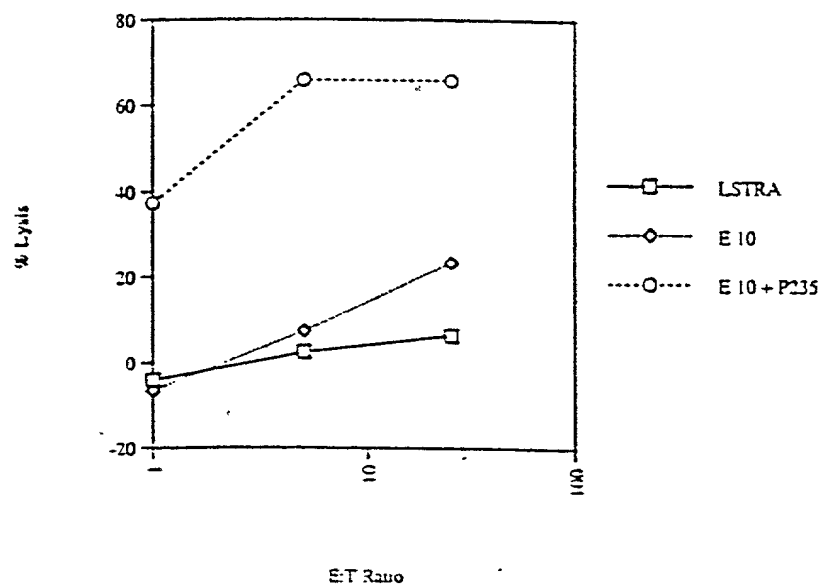
155 160 165 170 175 180 185 190 195 200 205 210 215 220 225
TVTFDGTPSYGHTPSHHAAQFPNHSFKHEDPMGQCGLGEQQYSVPPVYGCHTPTDCTGSQALLLRTPYSSDN
.....AAAAA.....AAAAA.....AA
.....RRRR.....
.....DDDDDDDDDDDD.....
.....

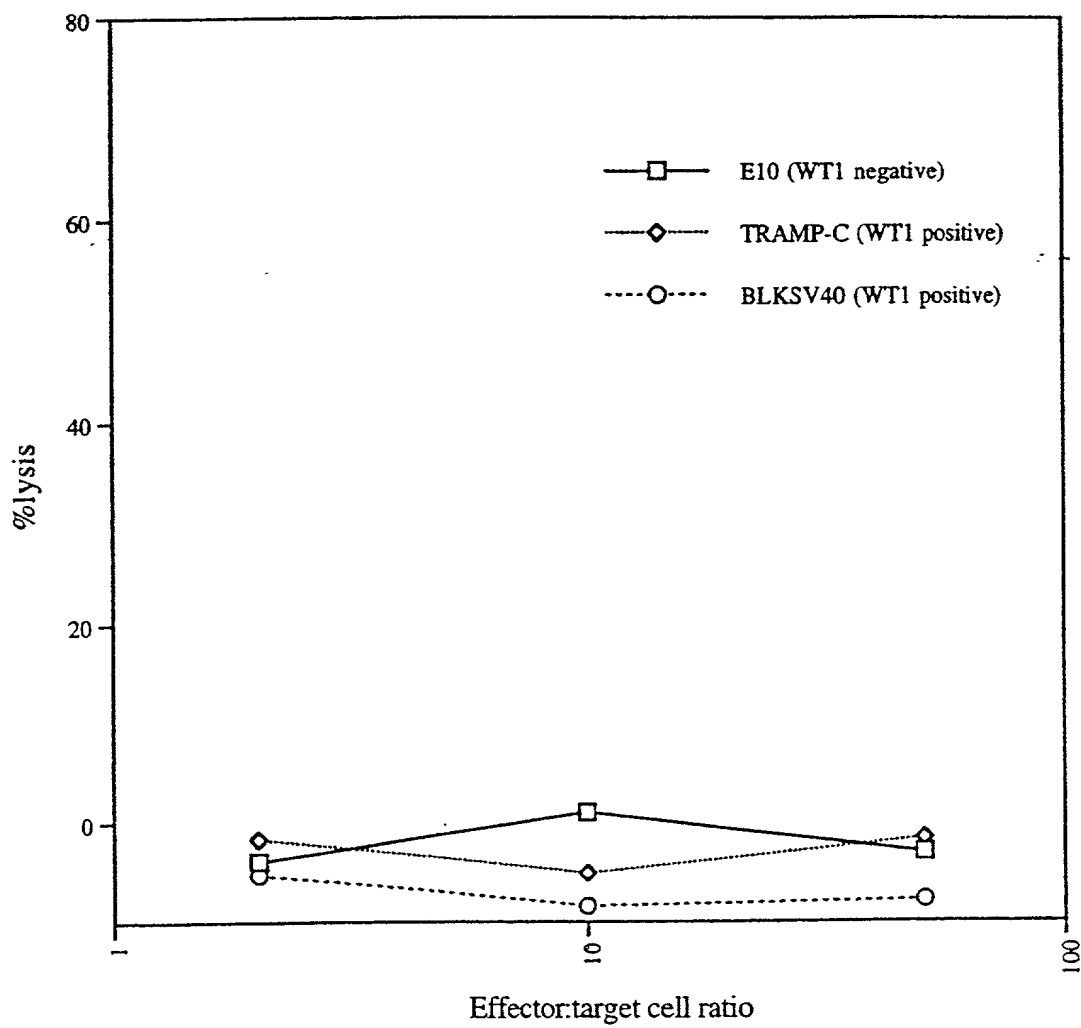
230 235 240 245 250 255 260 265 270 275 280 285 290 295 300
LYQMTSQLECMTNQMNLGATLKGVAAGSSSVKWTGEGSNHSTGYESDNHTTPILCGAQYRIHTHGVERGIQDV
AAAAAAAA.....AAA.AAA.....AAAAAAAAAA
.....RRRRRRRRRR.....RRRR.....RRRR.....
DDDDDD.....DDDDDDDDDD.....
.....ddddd.....

305 310 315 320 325 330 335 340 345 350 355 360 365 370 375
RRVPGVAPTLVRSASETSEKRPFCAYPGCNKRYFKLSHLQMHSRKHTGEKPYQCDFKDCERRFRSDQLKRHR
AAAAA.....AAAAA.....AAAA.AAAAAAA.
.....RRRR.....RRRR.....
.....DDDDDD.....
.....

380 385 390 395 400 405 410 415 420 425 430 435 440 445 450
RHTGVKPFQCKTCQRKFSRSDHLKTHTRTHTGKTSEKPFSCRWPSCQKKFARSDLVRRHNMHQRNMTKLQLAL
.....AAAA.AAAA.AA.....AAAA.....AAA.....AAAAAA.....AAA.....
.....RRRR..RRRR.....
.....
.....dddddddddd.....

FIG. 8A

A**B****FIG. 9A and 9B**

**FIG. 10A**

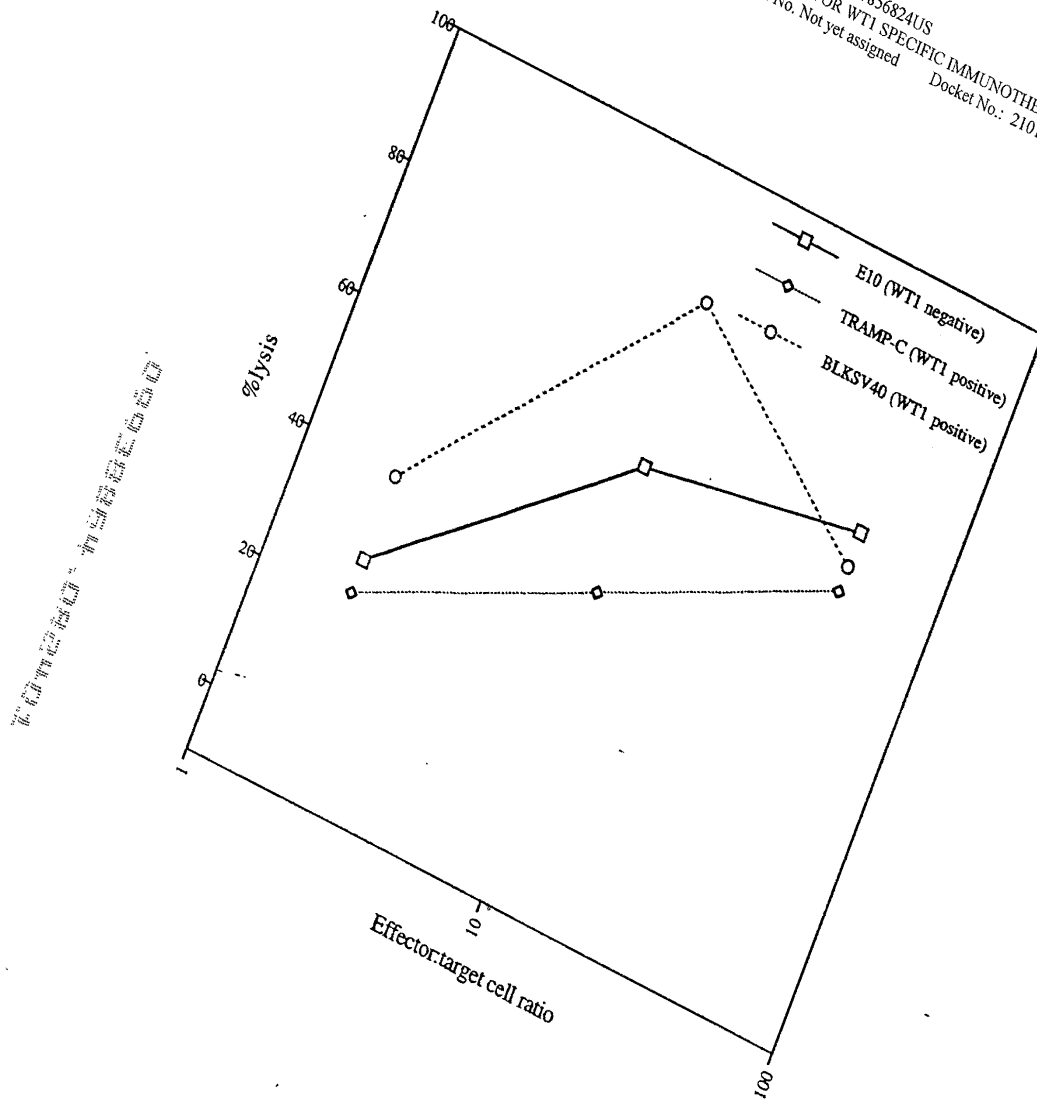
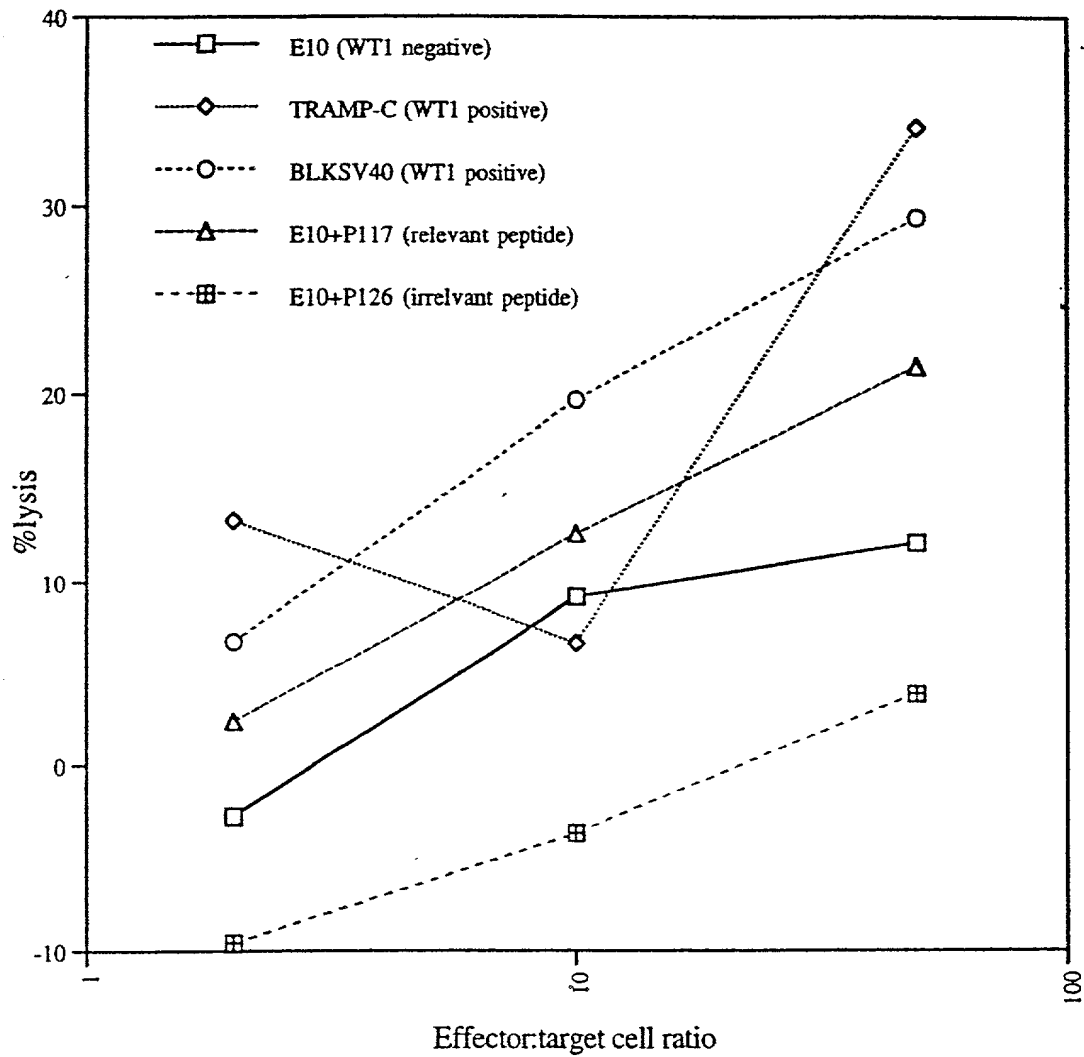
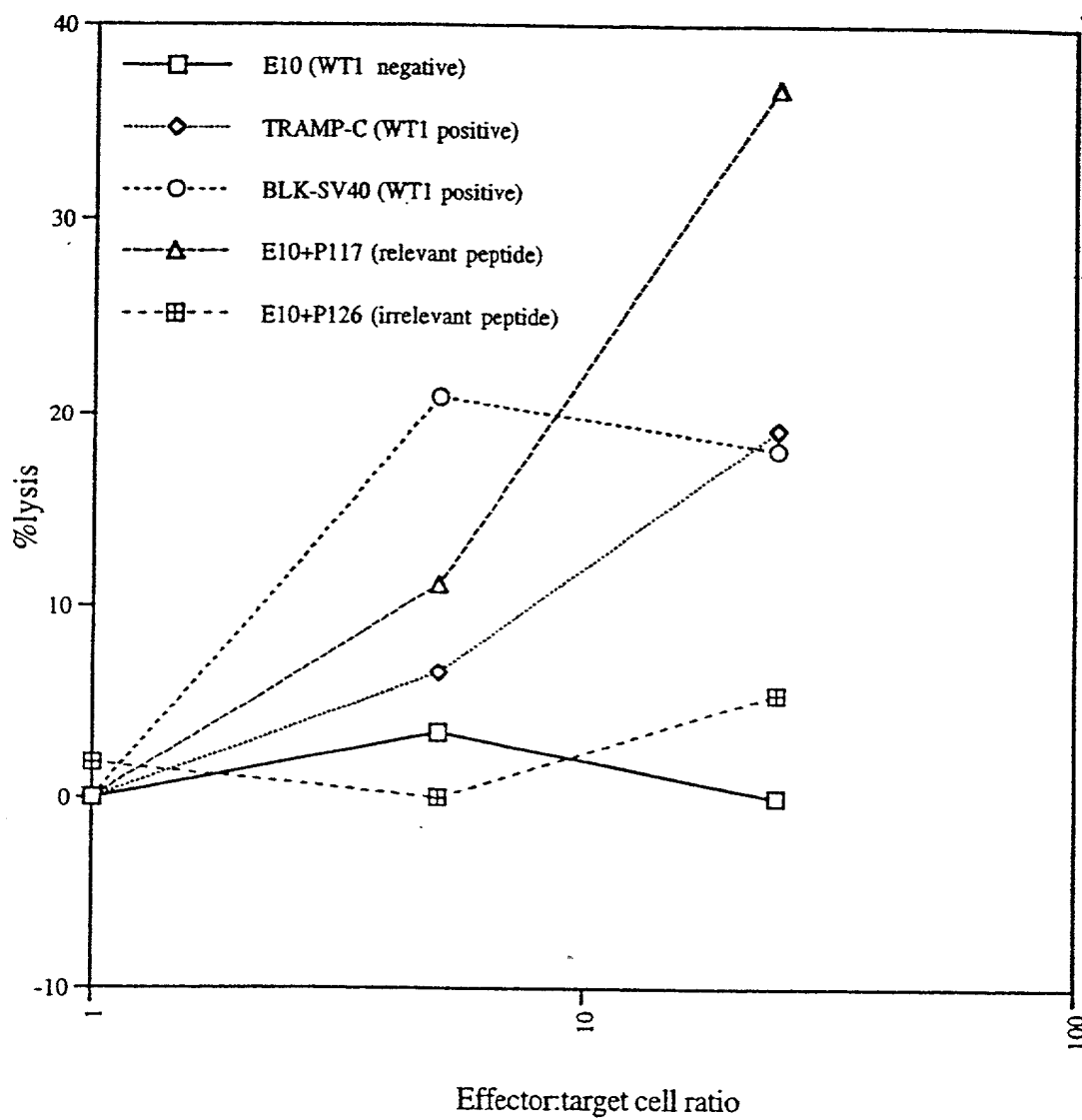
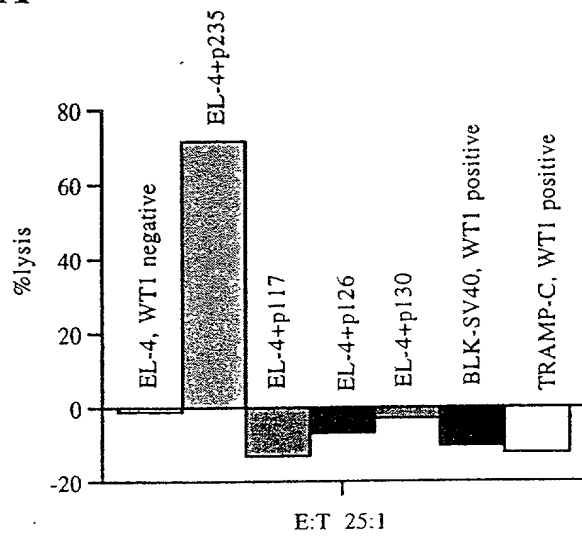
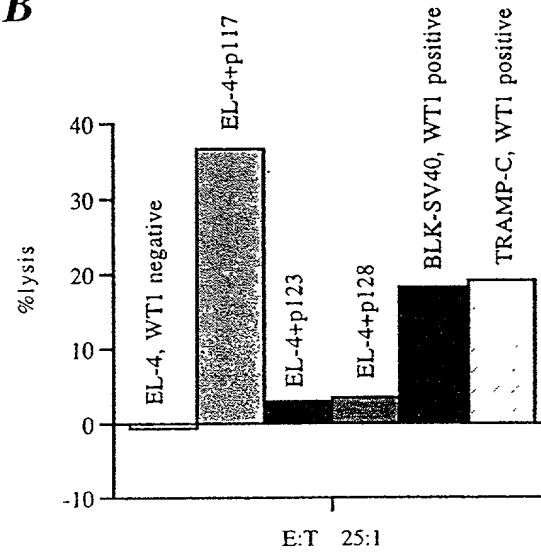
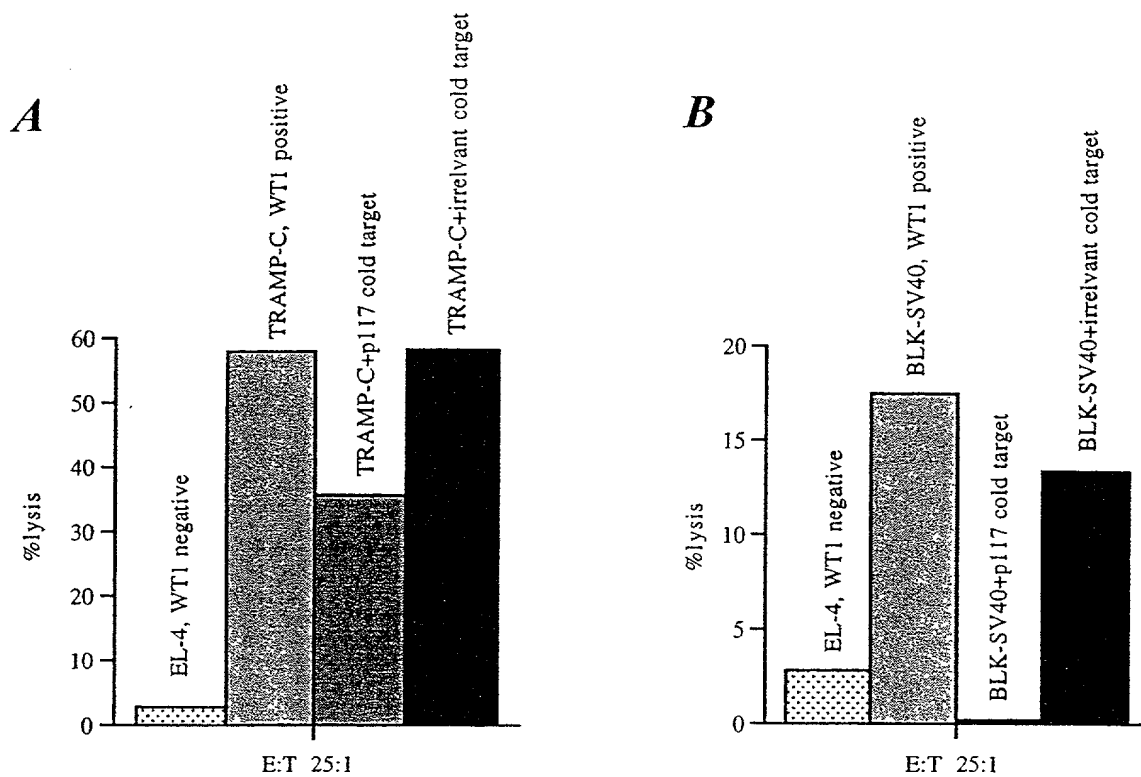


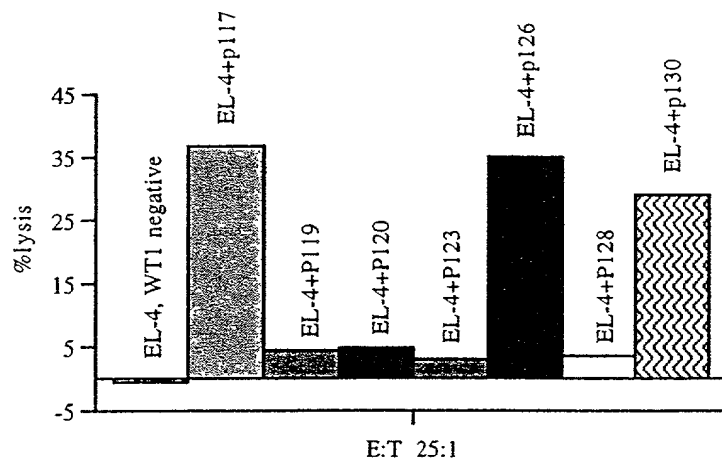
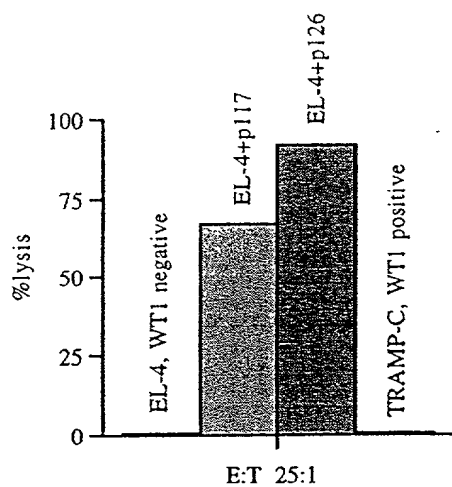
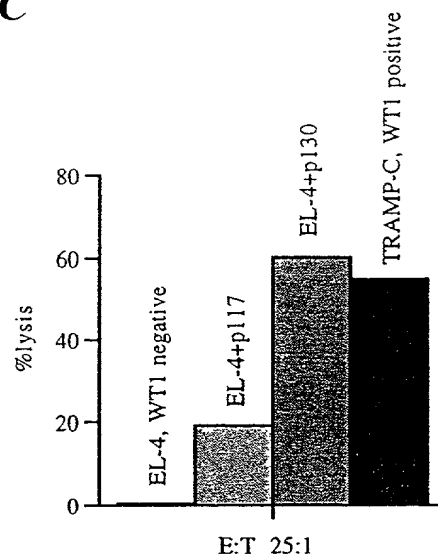
FIG. 10B

**FIG. 10C**

**FIG. 10D**

A**B****FIG. 11A and 11B**

**FIG. 12A and 12B**

A**B****C****FIG. 13A-13C**

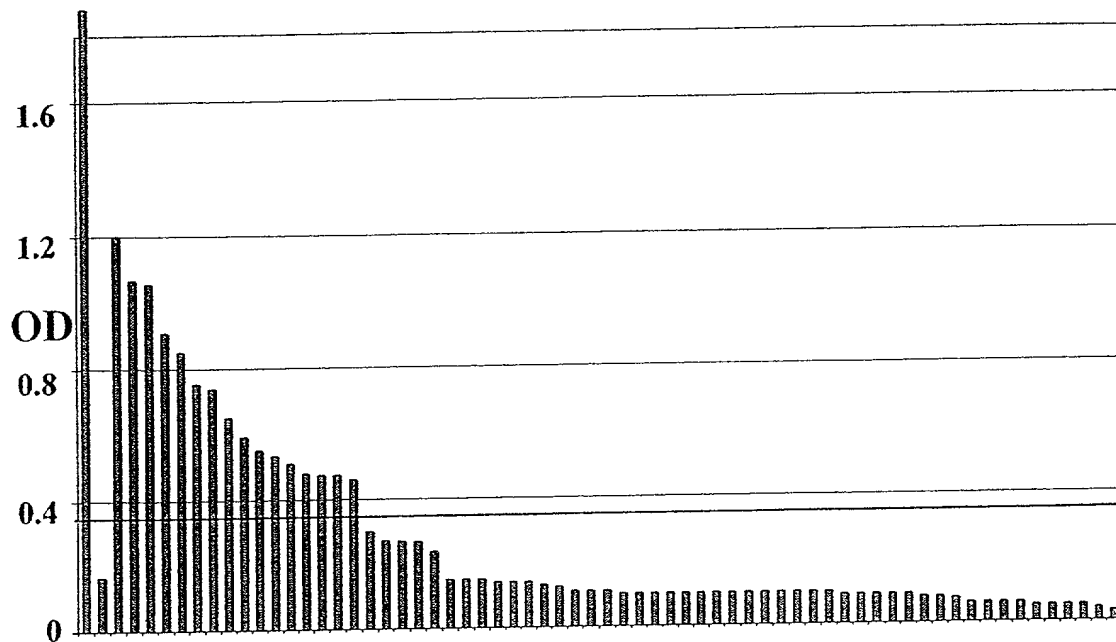


Fig. 14

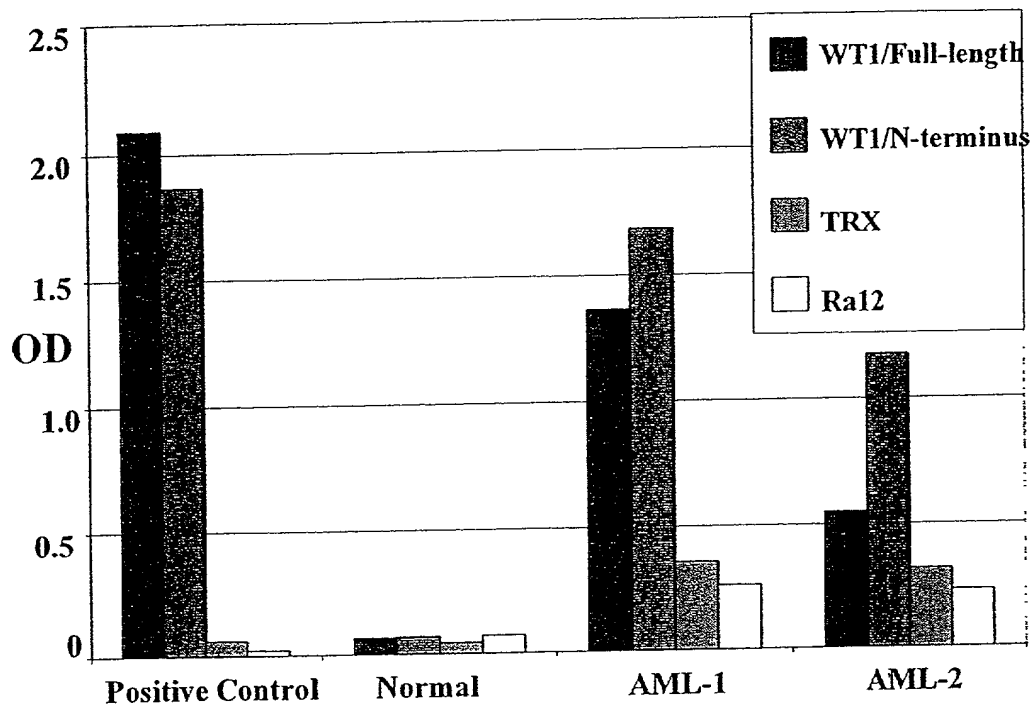


Fig. 15

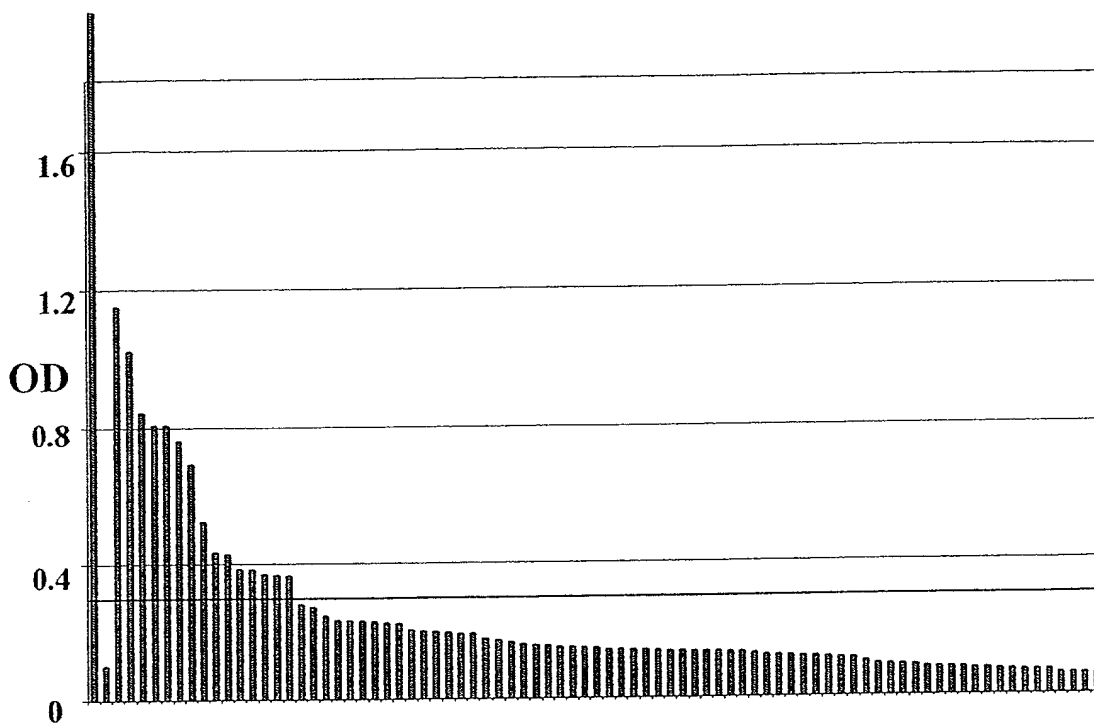


Fig. 16

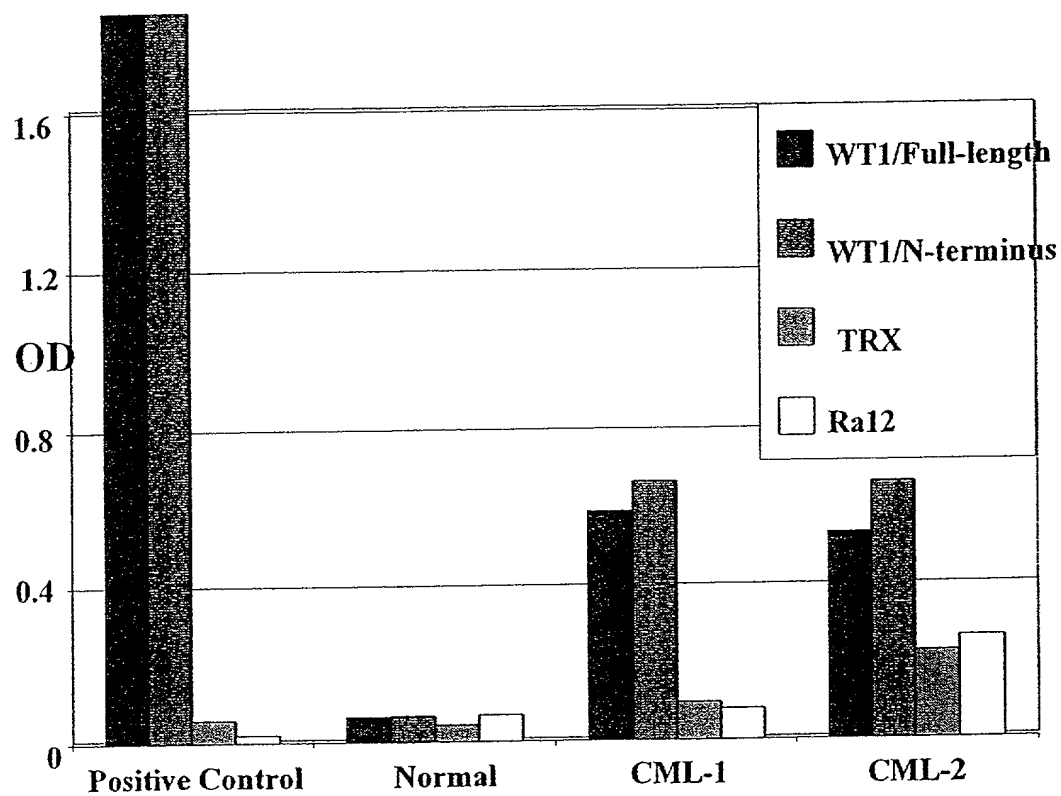


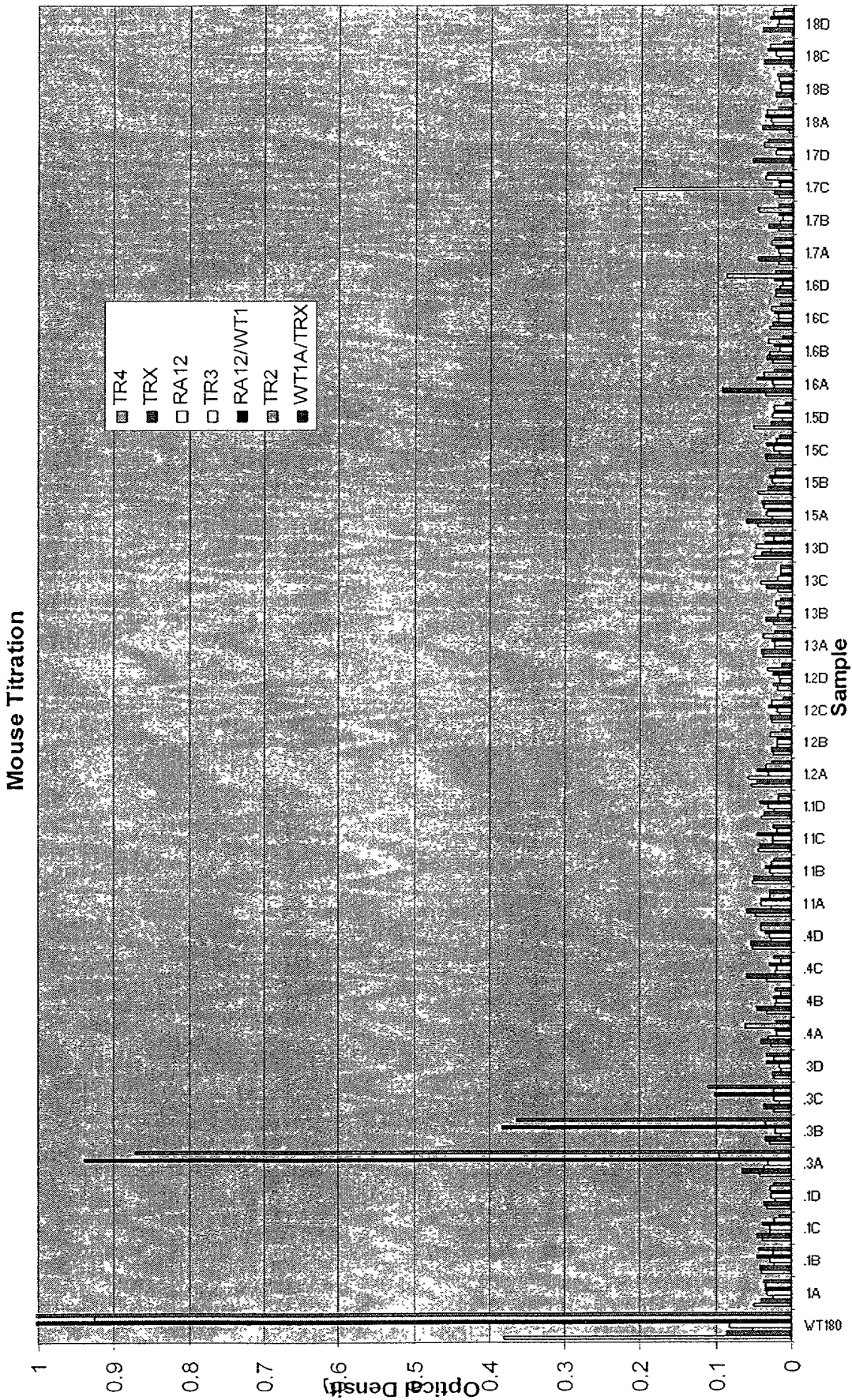
Fig. 17

TABLE 1: Characteristics of Recombinant WT1 Proteins Used for Serological Analysis

<u>Name</u>	<u>Recombinant Protein</u>	<u>WT1 Amino Acid Position</u>	<u>Molecular Weight</u>
WT1/full-length	Ra12-WT1 full length fusion protein	aa 1-449	85kDa
WT1/N-terminus	TRX-WT1 N-terminus fusion protein	aa 1-249	60kDa
WT1/C-terminus	WT1 C-terminus protein	aa 267-449	50kDa

Fig. 18

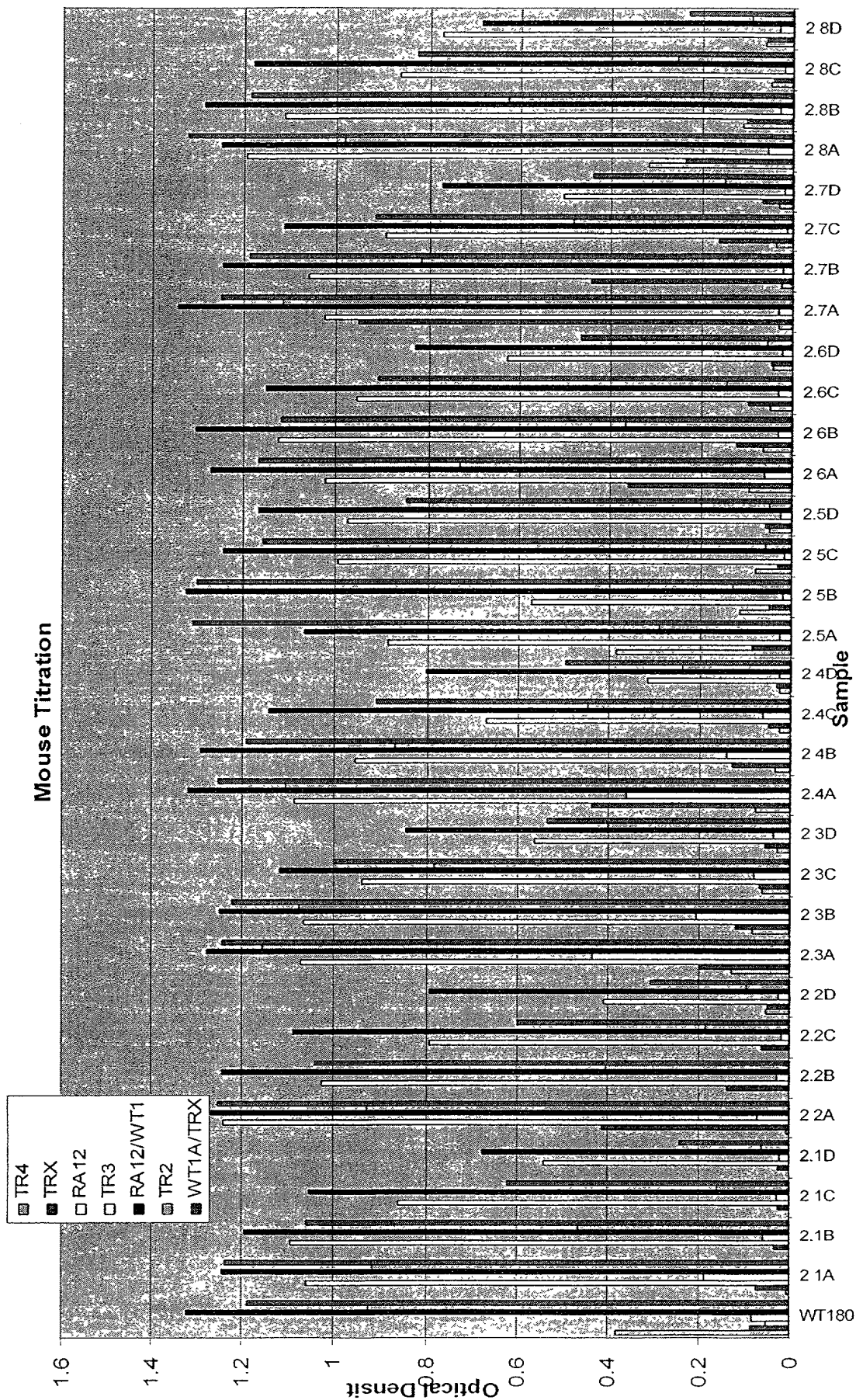
CID000622 Figure 1a Ab responses in group 0 and 1 (controls)



Control groups. A: 1:500 Dilution, B: 1:2000, C: 1:8000, D: 1:16000

FIG. 19 A

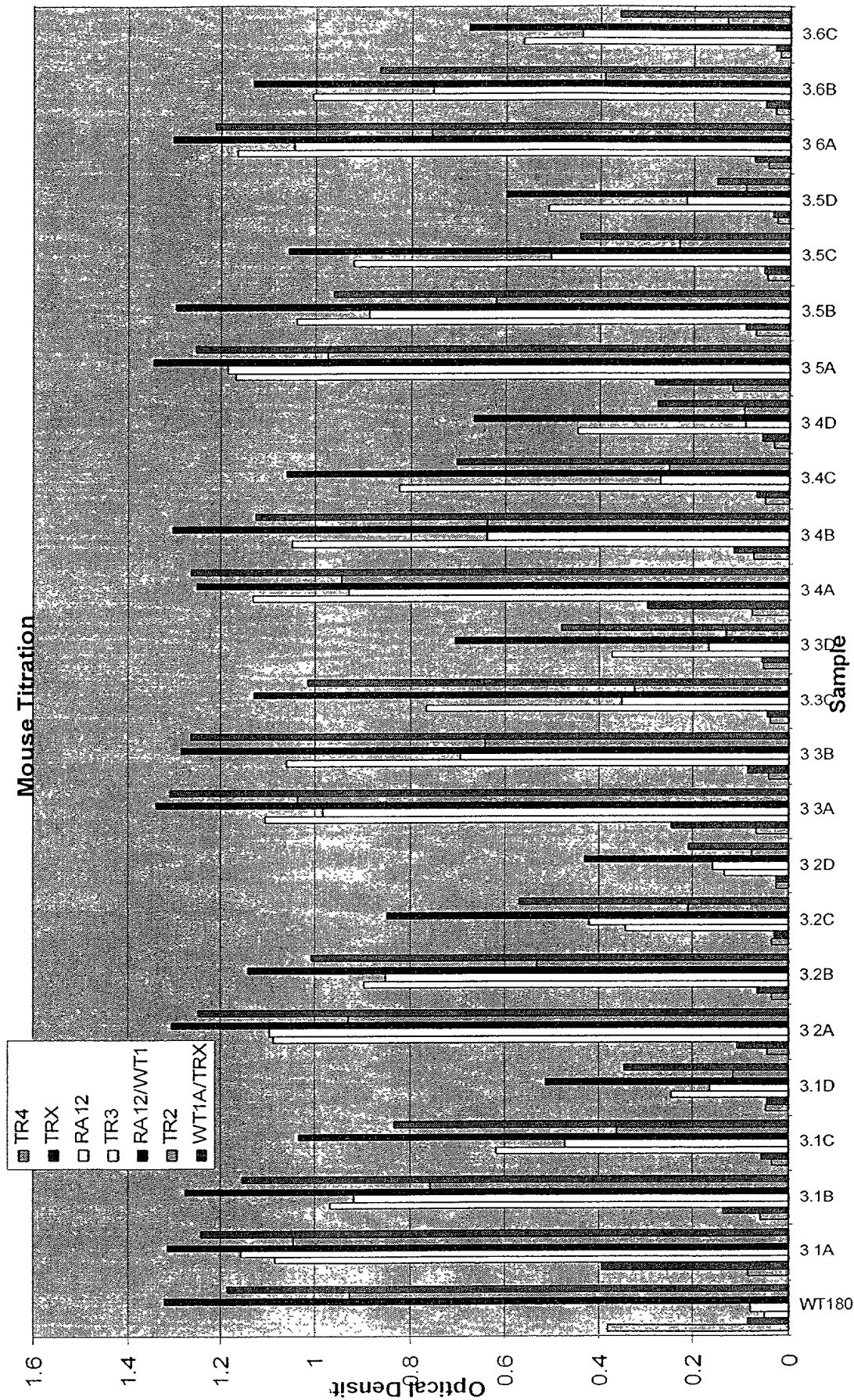
CID000622 Figure 1b. Ab responses in group 2 (25ug Ra12/WT1)



25ug Ra12/WT1+MPL-SE, A: 1:500 Dilution, B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19B

CID000622 Figure 1c. Ab responses in group 3 (100ug Ra12/WT1)

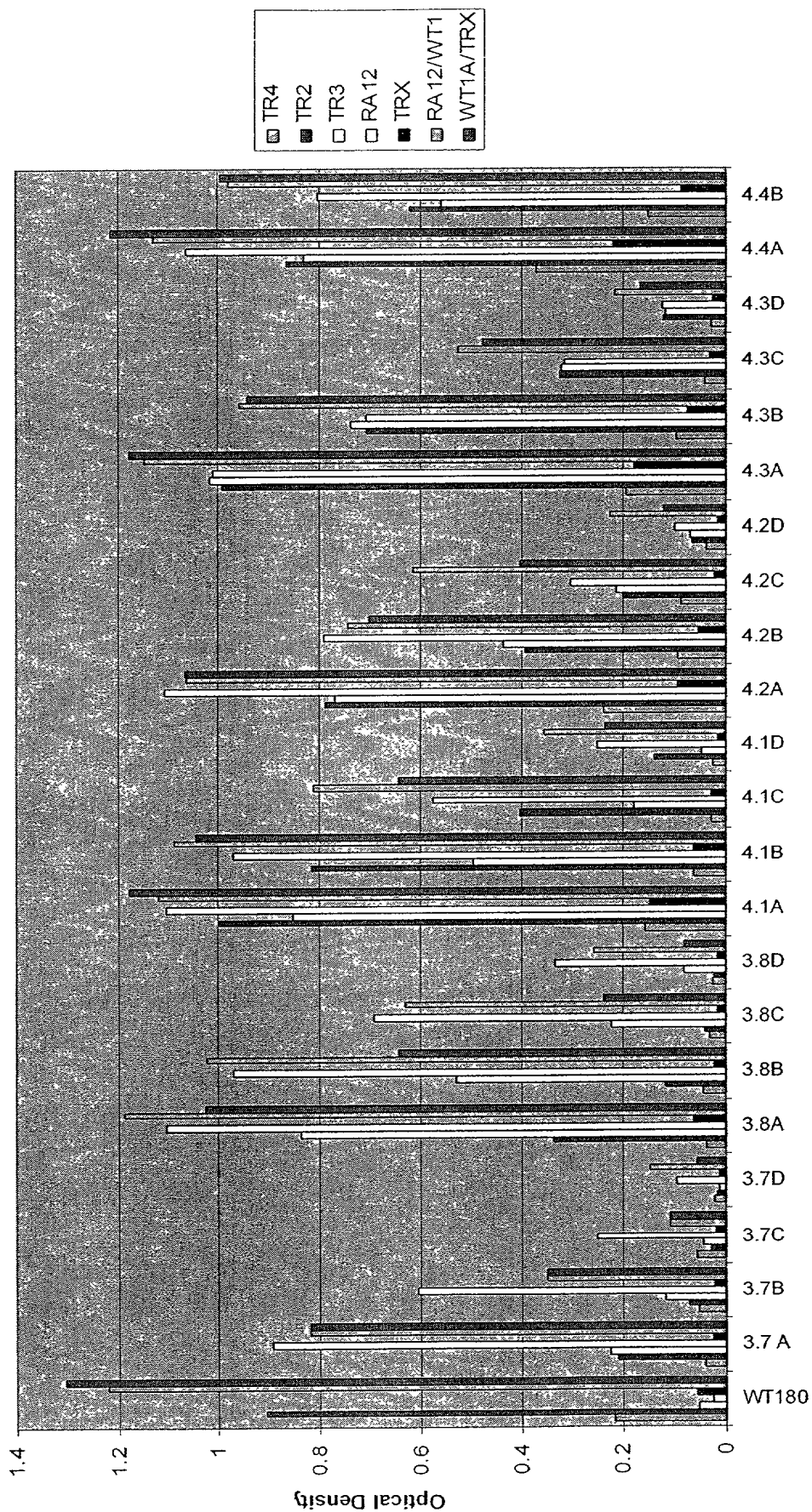


WT1. Dose Titration. Ab responses to WT1. 100ug Ra12-WT1+MPL-SE. A: 1;500 Dilution, B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19C

CID000622 Figure 1d. Ab responses in groups 3 and 4 (1000ug Ra12/WT1)

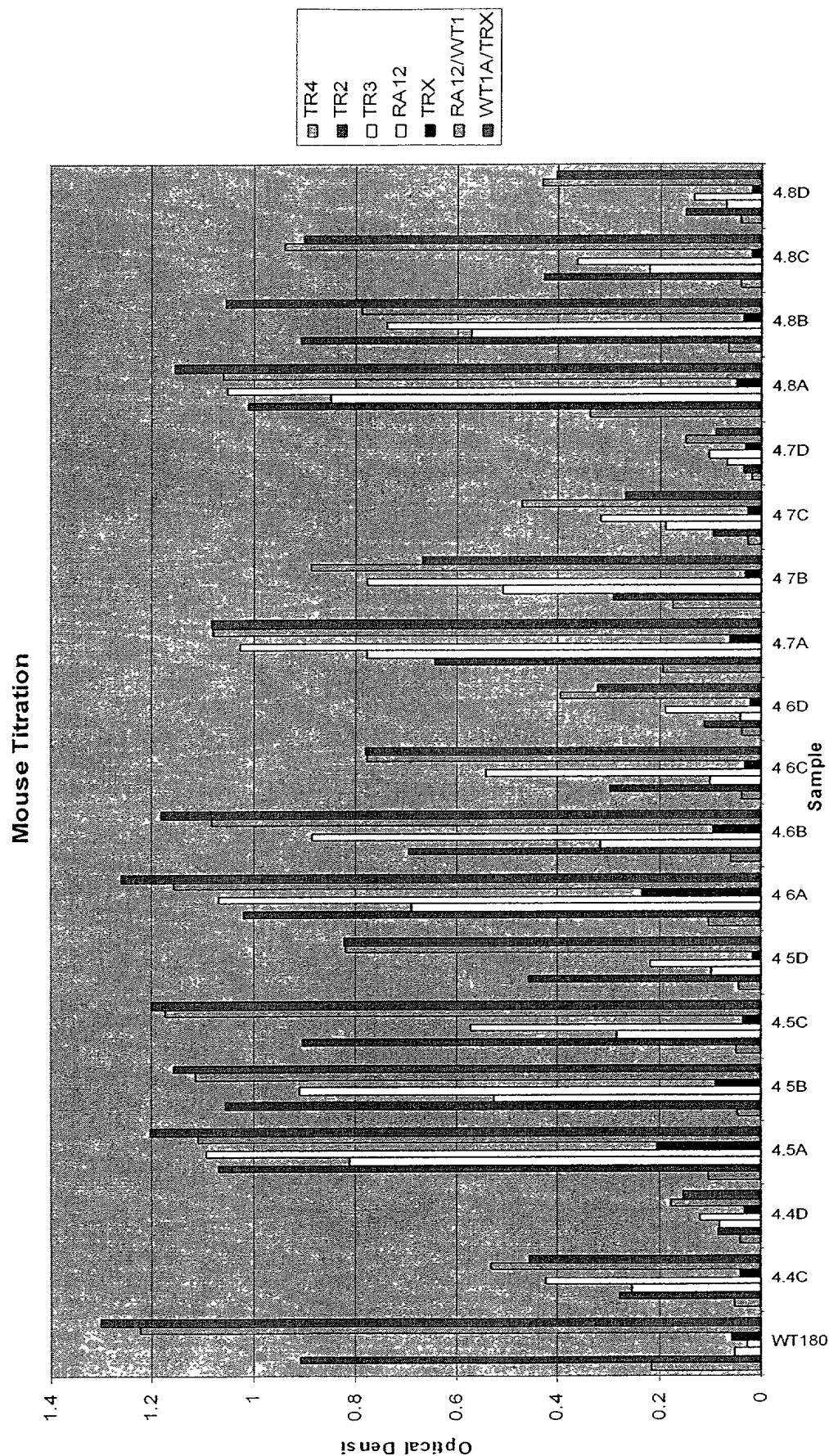
Mouse Titration



WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1:500 Dilution, B: 1:2000,
C: 1:8000, D: 1:16000

FIG. 19D

Figure 1e. Ab responses in group 4 (1000ug Ra12/WT1)



WT1. Dose Titration. Ab responses to WT1. 1000ug Ra12-WT1+MPL-SE. A: 1:500 Dilution,
B: 1:2000, C: 1: 8000, D: 1:16000

FIG. 19E

Figure 2a. Proliferative T-cell responses in WT1 protein immunized mice.
(Ra12WT1 dose titration, 3x in vivo, after 2IVS)

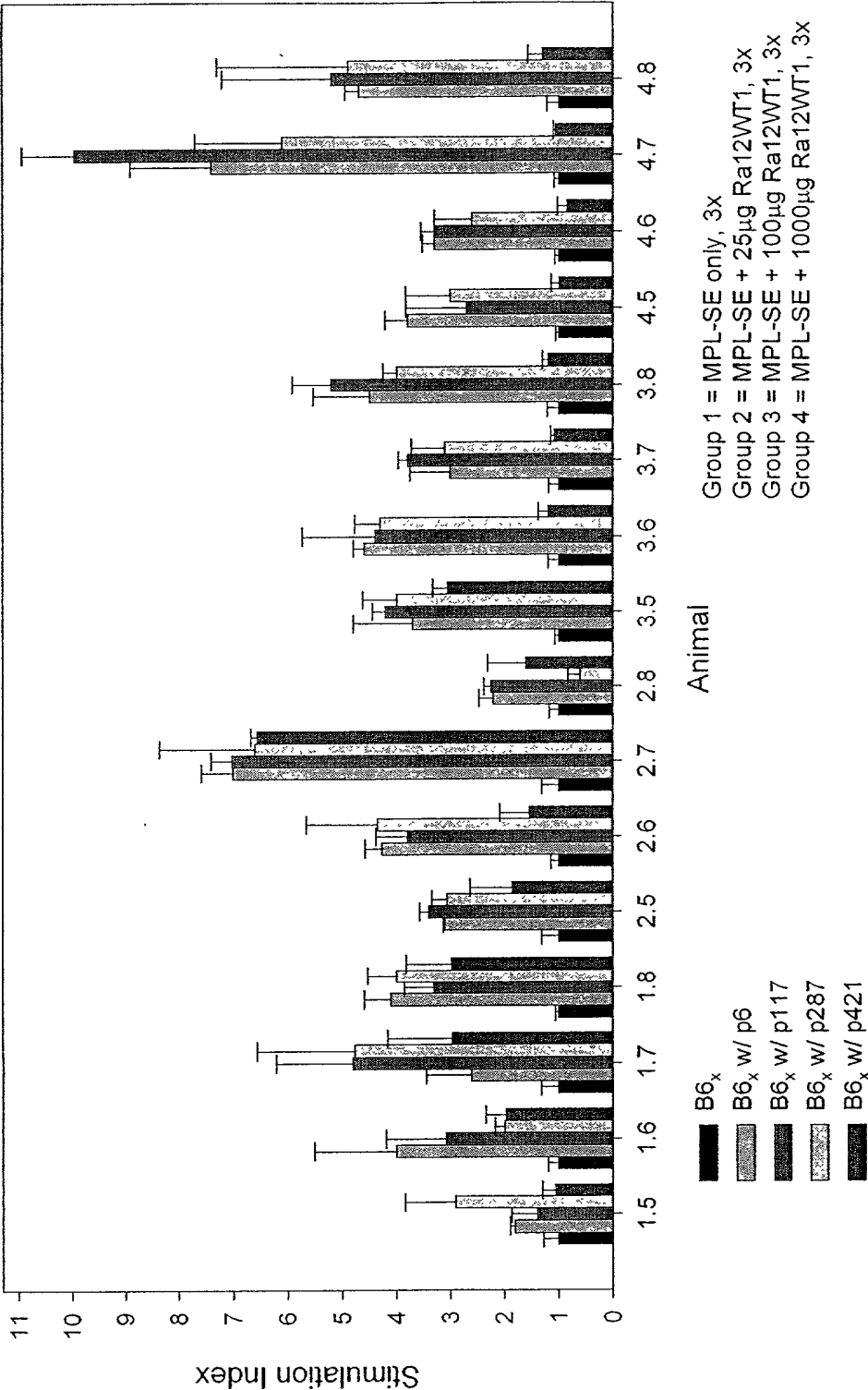


FIG. 20A

Figure 2b. Proliferative T-cell responses in WT1 protein immunized mice (Ra12WT1 dose titration, 6x in vivo, after 2IVS)

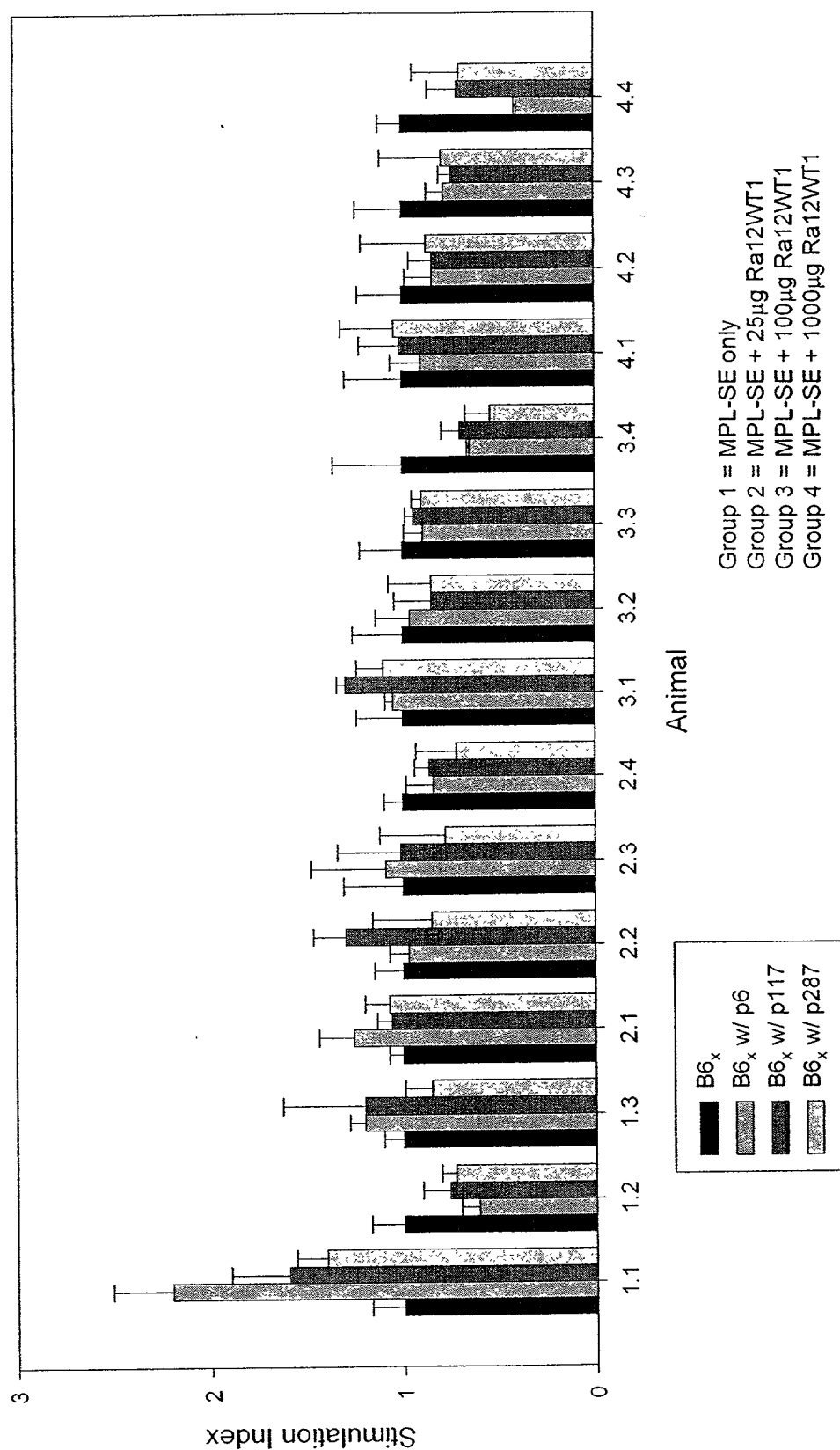
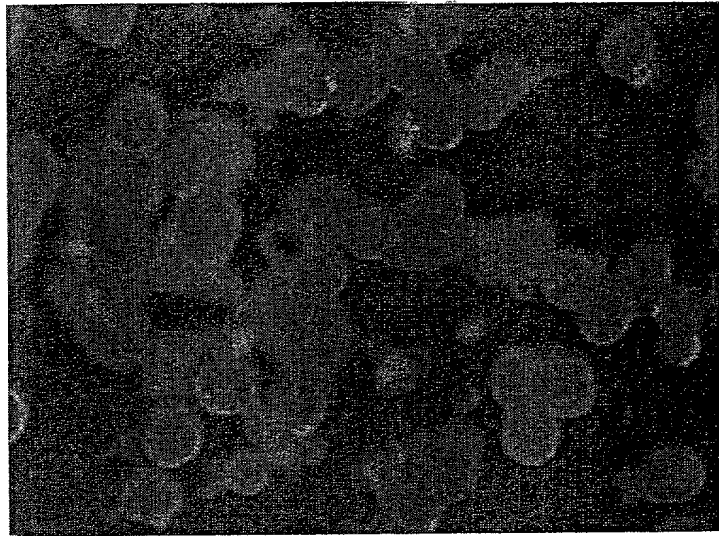


FIG. 20B

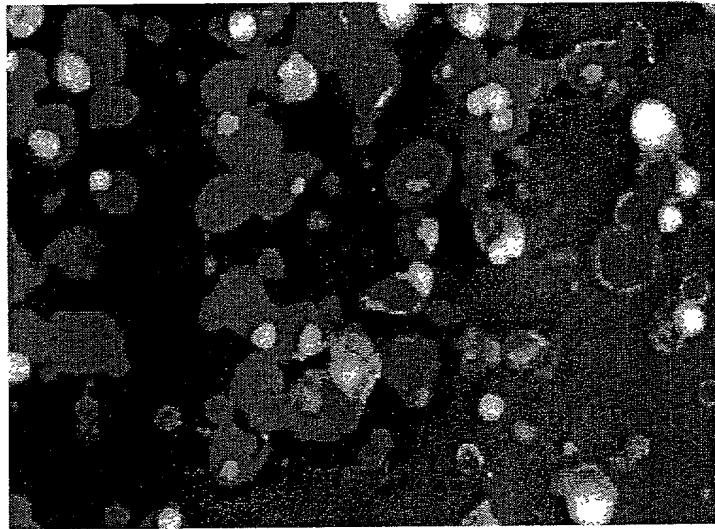
FIG. 21

Figure 1. WT1 expression in human DC following adeno WT1 and Vaccinia WT1 infection

**Control
(uninfected
human DC**



**Adeno WT1
infected human
DC**



**Vaccinia WT1
infected human
DC**

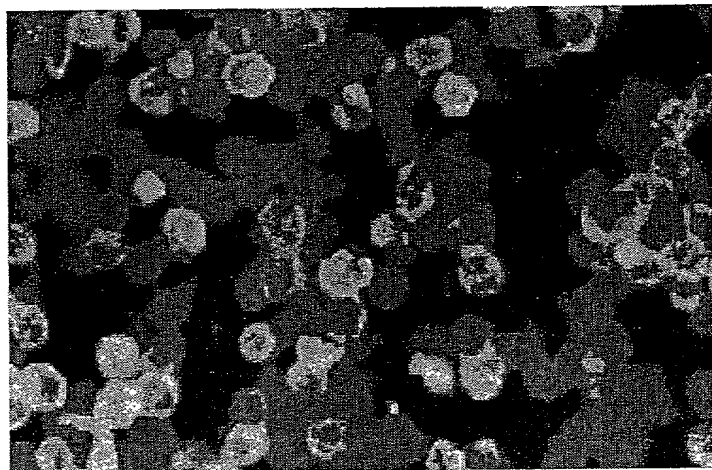
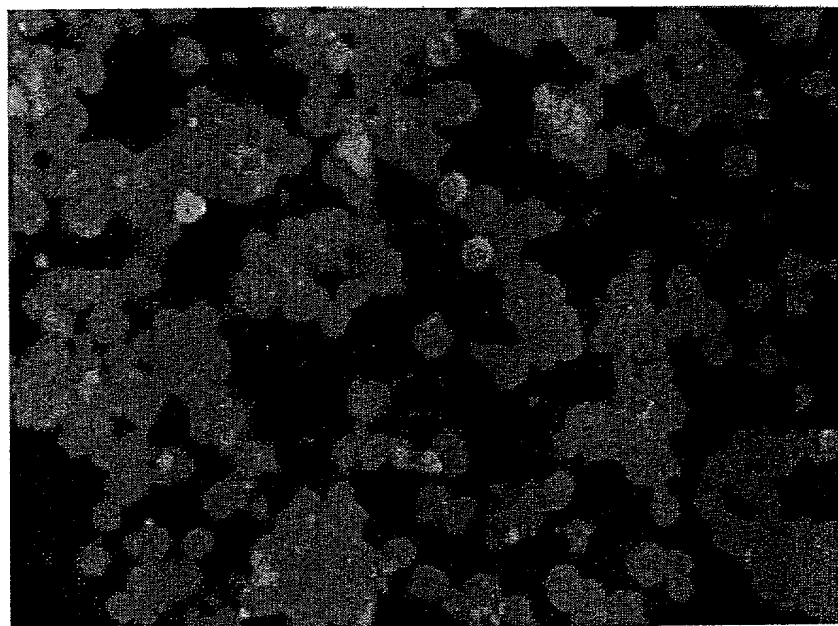


FIG. 21

FIG. 22

Figure 2. WT1 can be expressed reproducibly in human DC following adeno WT1 infection and is not induced by a control Adeno infection

**Control
(Adeno EGFP
infected
human DC)**



**Adeno WT1
infected human
DC**

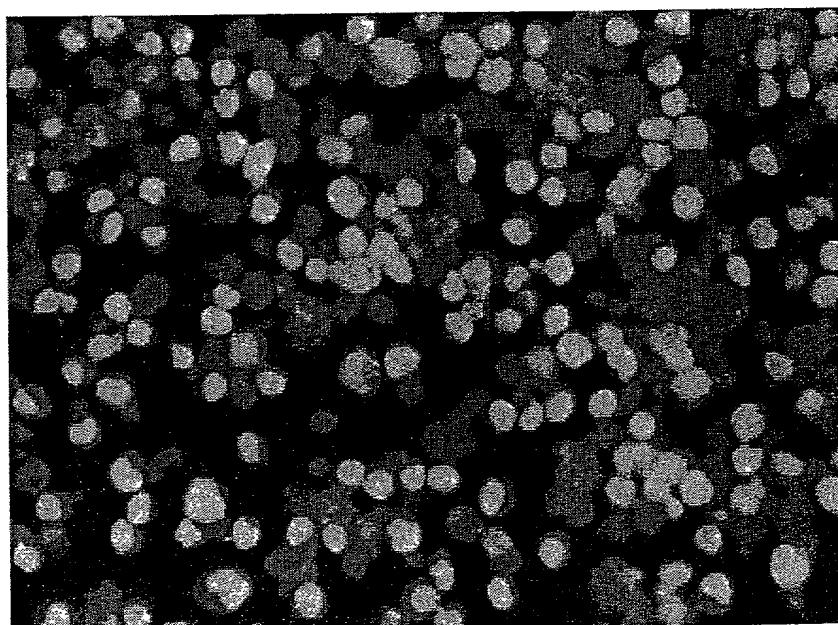


FIG. 22

FIG. 23

Figure 3 WT1 whole gene in vitro priming elicits WT1 specific T-cell responses (IFN-gamma ELISPOT)

